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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,183	02/18/2004	Tamraparni Dasu	2003-0107	4539

26652 7590 01/04/2007
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EXAMINER

BROWN JR, NATHAN H

ART UNIT PAPER NUMBER

2121

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/782,183	DASU ET AL.	
	Examiner	Art Unit	
	Nathan H. Brown, Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Examiner's Detailed Office Action

1. This Office Action is responsive to the communication for application 10/782,183, filed October 18, 2006.
2. Claims 1-20 are pending.
3. After the previous office action, claims 1-20 stood rejected.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Amended claims 1 and 11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter: abstraction and/or software per se. Amended claim 1 recites a "data quality auditing tool" comprising "a rule-based programming data analyzer" and "a set of rule-based criteria, wherein the set of rule-based criteria is implemented incrementally as an understating of rules associated with the set of rule-based criteria is gained." Claim 11 recites a method comprising "comparing received data ... against a set of rule-based criteria; and identifying ... data which violate the rule-based criteria, wherein the set of rule-based criteria is implemented incrementally as an understating of rules associated with the set of rule-based criteria is gained."

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Claim 1 recites a computer related manufacture, but no data structure that defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized. Further, no claimed computer-readable medium encoded with a computer program which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, is recited.

Claim 11 recites a process with no physical transformation and a final result that produces a modification of software (rules) per se. Clearly, no more than a 101 judicial exception is recited by claim 11, making it non-tangible. Further, given the general nature of the amendment, this amendment might simply suggests that the rules are modified by coding from time to time, as an understating of rules associated with the set of rule-based (data integrity) criteria is gained. Similarly, this amendment could suggest the use of machine learning to modify the rules as an understating of rules associated with the set of rule-based (data integrity) criteria is gained. In either case, claim 11 preempts the application of well-known abstract ideas in the areas of *rule-base programming* and *machine learning* for rule modification.

Clearly, claims 1 and 11 are non-statutory under 35 U.S.C. 101

Response to Arguments

4. Applicant's arguments filed October 18, 2006 have been fully considered but they are not persuasive.

Rejection of Claims 1-3, 6, 10, 11-13, 16 and 20 Under 35 U.S.C. §102(b)

Applicant argues that claims 1 and 11 are patentable over Gobat as Applicant has added the limitation: "wherein the set of rule-based criteria is implemented incrementally as an understanding of rules associated with the set of rule-based criteria is gained" to claims 1 and 11. Applicant argues that "Gobat fails to teach or suggest such a concept of implementing the set of rule-based criteria incrementally.

Examiner rebuts by pointing out that Gobat makes two assertions that suggest that the rule-based criteria are implemented incrementally:

(1) It can be appreciated that **over time** related data associated with a particular account (i.e. a customer) may become inconsistent across the different data bases. (emphasis added) (*see* col. 1, lines 13-16)

(2) ... rules are generated for each IDM 115i by subject matter experts who **understand** the purpose and functions of the associated application, the logical relationships among the data elements in all data bases in the system, and the relative operational risks and impacts associated with completing certain operational tasks when the data elements required to complete those tasks may or may not be synchronized with logically-related data elements in other data bases in the system. (emphasis added) (*see* col. 3, lines 7-15)

From (1) it can be understood that the data relationships become inconsistent over time.

Therefore, from (2), the understanding of the subject matter experts must change over time to keep track of the changing logical relationships among the data elements in all data bases in the system. Since the rules are generated by subject matter experts, based on their understanding of

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the logical relationships among the data elements in all data bases in the system, Gobat does teach or suggest such a concept of implementing the set of rule-based criteria incrementally. Accordingly, Examiner maintains the rejection of claims 1-3, 6, 10, 11-13, 16 and 20 under 35 U.S.C. §102(b).

Rejection of Claims 4 and 14 Under 35 U.S.C. §103(a)

Applicant traverses the rejection of claims 4 and 14 as being unpatentable over Gobat in view of Hay under 35 U.S.C. §103(a) because “one of skill in the art would not have sufficient motivation or suggestion to combine Gobat with Hay. Applicant notes that “Gobat relates to a facility for providing and maintaining automatically the integrity of data ...” while Hay teaches “a metadata repository”. Examiner rebuts by noting that Hay defines a: “A BUSINESS RULE CONSTRAINT must be either a CONDITION or an INTEGRITY CONSTRAINT.” (*see* p. 2 of 6). Above the definition Hay asserts:

The action assertion here is a BUSINESS RULE CONSTRAINT, to constrain either an ENTITY TYPE / CLASS, a ROLE, or an ATTRIBUTE. For example, a validation constraint might constrain the values that can be given to an ATTRIBUTE. Another kind of constraint might specify when an ENTITY TYPE / CLASS might be updated. And so forth.

Clearly, the BUSINESS RULE CONSTRAINT plays a role in the maintenance of data integrity. While the foci of Gobat’s and Hay’s *documents* may differ, both documents teach inventions that have common purpose in an aspect of their application, i.e., data integrity in databases. Accordingly, Examiner maintains that Gobat should be combined with Hay and claims 4 and 14 are not patentable over Gobat in view of Hay under 35 U.S.C. §103(a).

Rejection of Claims 5 and 15 Under 35 U.S.C. §103(a)

Applicant argues that "...inasmuch as claim 5 depends from claim 1 and claim 15 from claim 11 that these claims are patentable inasmuch as the parent claims are patentable." Examiner maintains the rejections of claims 1 and 11; therefore, claims 5 and 15 are not patentable.

Rejection of Claims 7 and 17 Under 35 U.S.C. §103(a)

Applicant traverses the rejection of claims 7 and 17 as being unpatentable over Gobat in view of Plale et al. under 35 U.S.C. §103(a) because "one of skill in the art would not have sufficient motivation or suggestion to combine Gobat with Plale et al. Applicant specifically notes that Examiner has made not obvious argument. Examiner provides that the motivation to combine Gobat with Plale et al. is to apply the aspects of dQUOB that allow formulation, implementation, and execution of queries that eliminate large amounts of unnecessary data processing and transfers.

Rejection of Claims 8-9 and 18-19 Under 35 U.S.C. §103(a)

Applicant traverses the rejection of claims 8-9 and 18-19 as being unpatentable over Gobat in view of Klein under 35 U.S.C. §103(a) because Klein and Gobat are not analogous art. Examiner rebuts by asserting that one skilled in the art of rule-base programming and implementation would have been well aware of the necessity of good conflict resolution strategies for rule choice at the time of Applicant's invention (*see* pp. 2-3, §2) and that Klein provides models of conflict resolution strategy readily applicable to any rule-based approach:

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The aim of this work can thus be viewed as an attempt to further the evolution of computer-based systems towards distinct handling of distinct forms of knowledge. Conventional programming languages distinguish only data and procedures. Traditional expert systems are (beginning to) treat control expertise distinctly. The work described herein attempts to take this one step beyond traditional expert systems by treating conflict resolution expertise as a separate category, thus giving it first-class status as well. (see p. 4)

Examiner respectfully submits that one skilled in the art of rule-base systems development would have *well* been motivated to seek out the information in Klein to provide stronger conflict resolution algorithms than found in many existing systems or to guide ad hoc development. Accordingly, Examiner maintains the rejection of claims 8-9 and 18-19.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

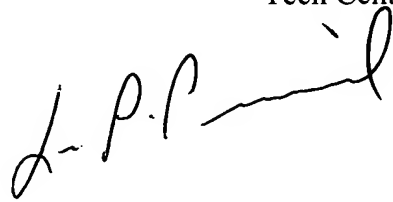
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Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan H. Brown, Jr. whose telephone number is 571-272- 8632. The examiner can normally be reached on M-F 0830-1700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.(toll-free).

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December 22, 2006



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